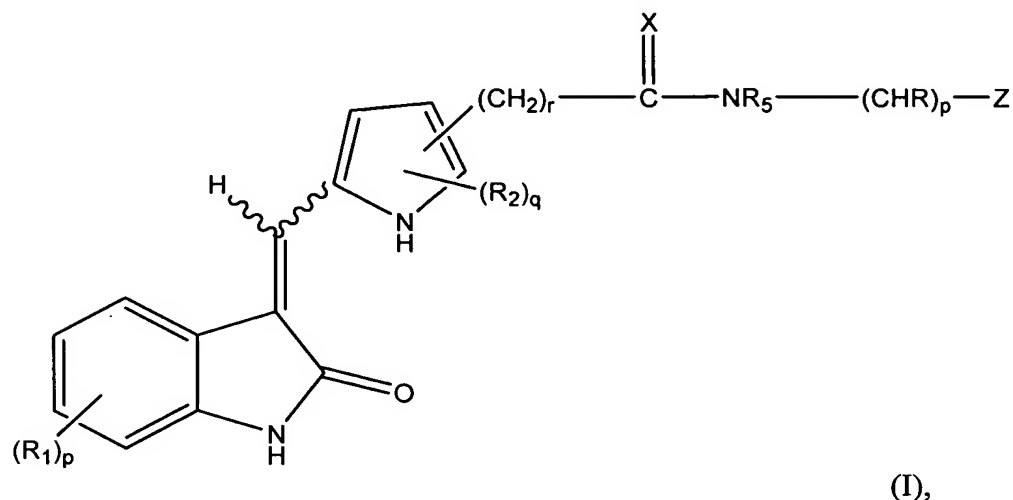


**WHAT IS CLAIMED IS:**

1. A method for treating excessive osteolysis in a patient, comprising administering to said patient an effective amount of a compound of Formula I:



wherein

R is independently H, OH, alkyl, aryl, cycloalkyl, heteroaryl, alkoxy, heterocyclic and amino;

each R<sub>1</sub> is independently selected from the group consisting of alkyl, halo, aryl, alkoxy, haloalkyl, haloalkoxy, cycloalkyl, heteroaryl, heterocyclic, hydroxy, -C(O)-R<sub>8</sub>, -NR<sub>9</sub>R<sub>10</sub>, -NR<sub>9</sub>C(O)-R<sub>12</sub> and -C(O)NR<sub>9</sub>R<sub>10</sub>;

each R<sub>2</sub> is independently selected from the group consisting of alkyl, aryl, heteroaryl, -C(O)-R<sub>8</sub> and SO<sub>2</sub>R'', where R'' is alkyl, aryl, heteroaryl, NR<sub>9</sub>N<sub>10</sub> or alkoxy;

each R<sub>5</sub> is independently selected from the group consisting of hydrogen, alkyl, aryl, haloalkyl, cycloalkyl, heteroaryl, heterocyclic, hydroxy, -C(O)-R<sub>8</sub> and (CHR)<sub>r</sub>R<sub>11</sub>;

X is O or S;

p is 0-3;

q is 0-2;

r is 0-3;

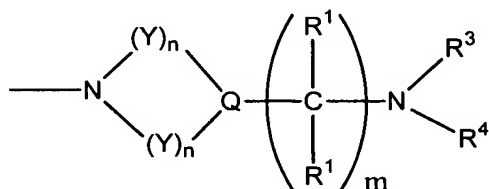
R<sub>8</sub> is selected from the group consisting of -OH, alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

R<sub>9</sub> and R<sub>10</sub> are independently selected from the group consisting of H, alkyl, aryl, aminoalkyl, heteroaryl, cycloalkyl and heterocyclic, or R<sub>9</sub> and R<sub>10</sub> together with N may form a ring, where the ring atoms are selected from the group consisting of C, N, O and S;

$R_{11}$  is selected from the group consisting of  $-OH$ , amino, monosubstituted amino, disubstituted amino, alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$Z$  is  $OH$ ,  $O$ -alkyl, or  $-NR_3R_4$ , where  $R_3$  and  $R_4$  are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, cycloalkyl, and heterocyclic, or  $R_3$  and  $R_4$  may combine with  $N$  to form a ring where the ring atoms are selected from the group consisting of  $CH_2$ ,  $N$ ,  $O$  and  $S$  or



wherein  $Y$  is independently  $CH_2$ ,  $O$ ,  $N$  or  $S$ ,

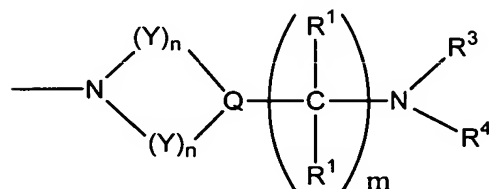
$Q$  is  $C$  or  $N$ ;

$n$  is independently 0-4; and

$m$  is 0-3;

or a salt thereof.

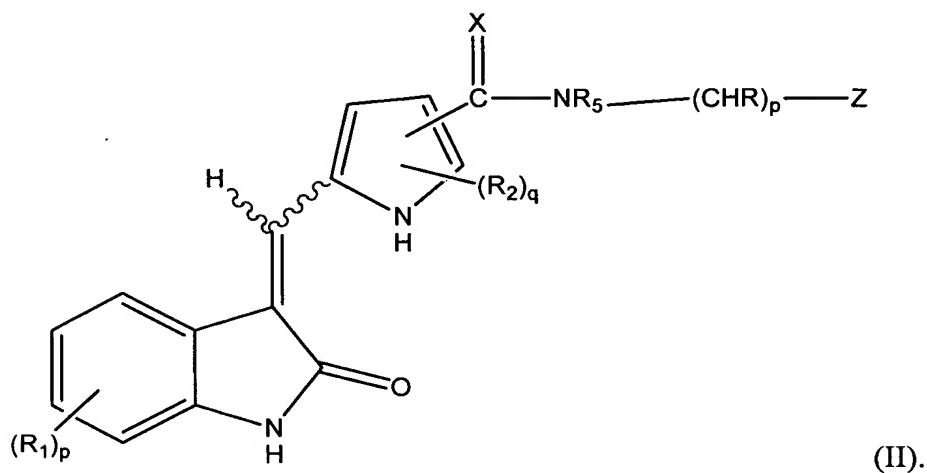
2. The method of claim 1, wherein  $R_1$  is halo and  $p$  is 1.
3. The method of claim 2, where  $Z$  is  $-NR_3R_4$ , wherein  $R_3$  and  $R_4$  form a morpholine ring.
4. The method of claim 1, wherein  $Z$  is:



wherein each  $Y$  is  $CH_2$ , each  $n$  is 2,  $m$  is 0 and  $R_3$  and  $R_4$  form a morpholine ring.

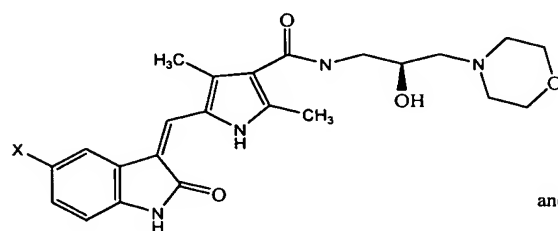
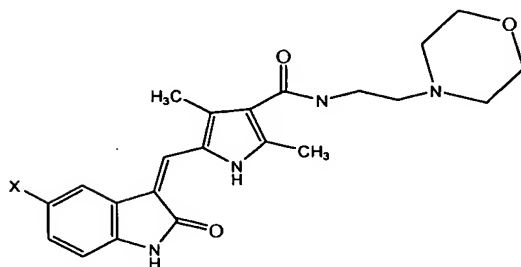
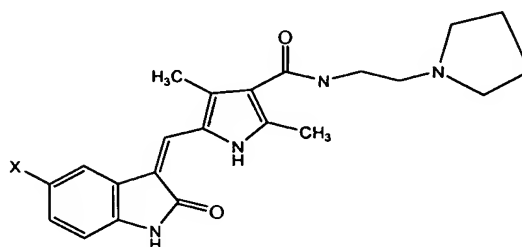
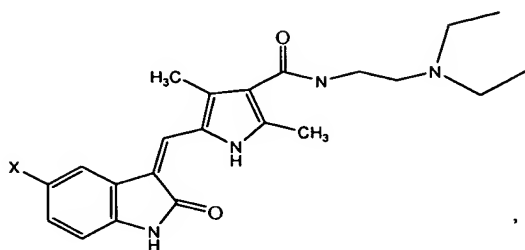
5. The method of any of claims 1-3, wherein  $R_2$  is methyl and  $q$  is 2, wherein the methyls are bonded at the 3 and 5 positions.

6. The method of claim 1, wherein the compound administered is a compound of Formula II:

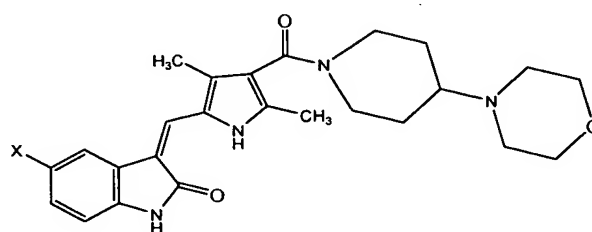


7. The method of claim 6, wherein  $R_5$  is H.
8. The method of claim 6, wherein  $R_2$  is methyl,  $q$  is 2, wherein the methyls are bonded at the 3 and 5 positions.
9. The method of claim 6, wherein the patient has cancer that has metastasized to bone.
10. The method of claim 6, wherein the patient has a cancer that secretes M-CSF.
11. The method of claim 6, wherein the patient has osteoporosis.
12. The method of claim 6, wherein the patient is post-menopausal.

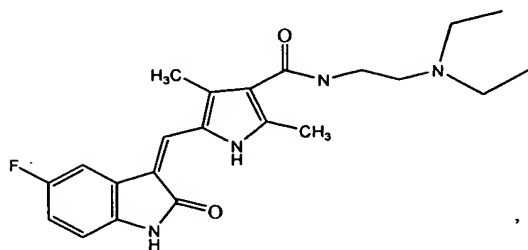
13. The method of claim 1, wherein the compound administered is selected from the group consisting of



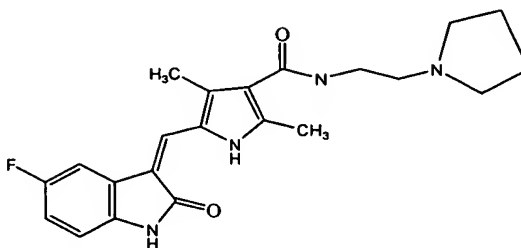
and



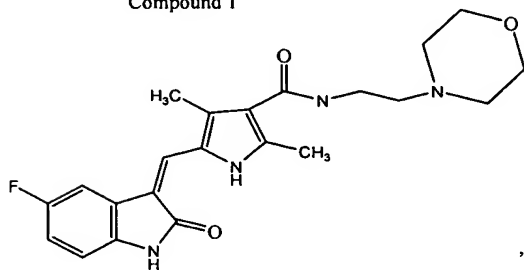
14. The method of claim 1, wherein the compound of formula I is selected from the group consisting of:



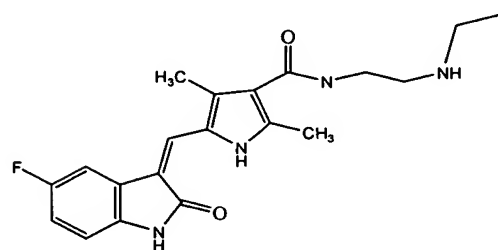
Compound 1



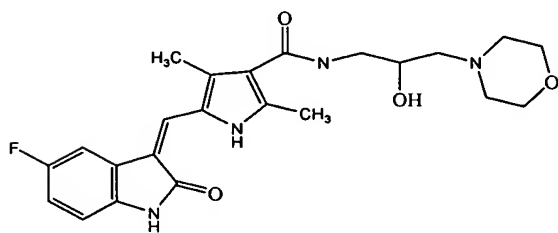
Compound 2



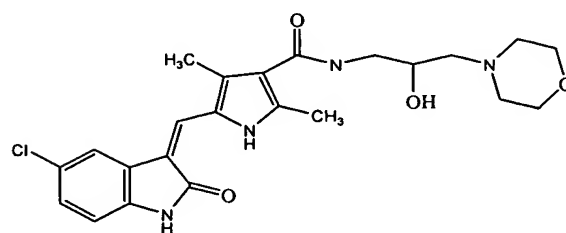
Compound 3



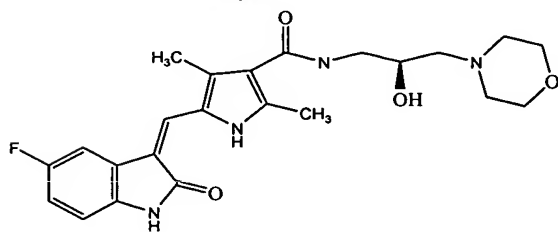
Compound 8



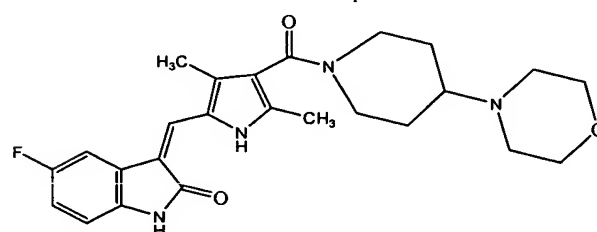
Compound 6



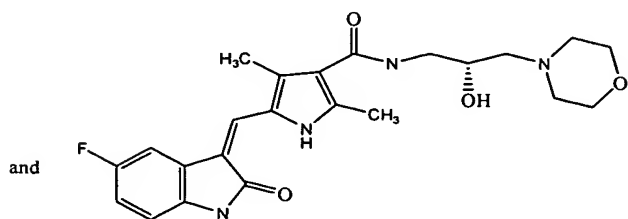
Compound 7



Compound 4

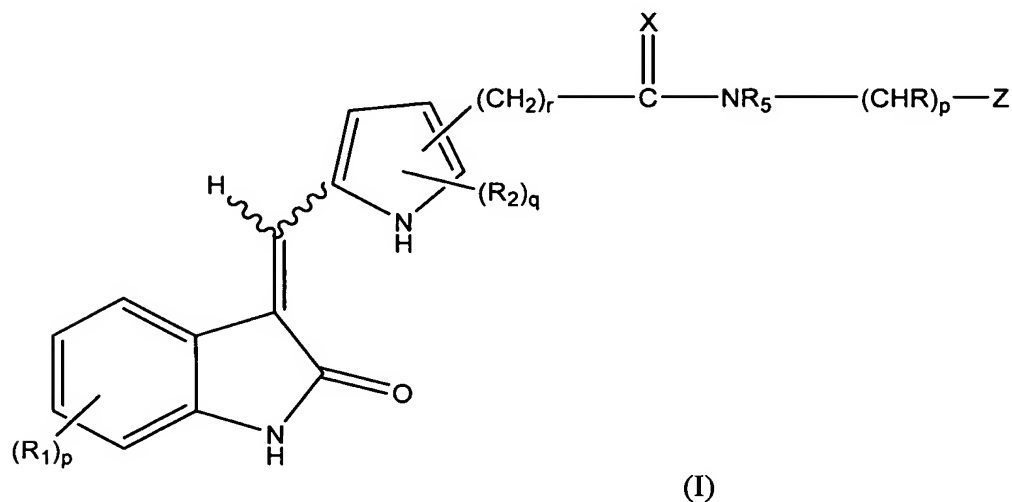


Compound 9



Compound 5

15. A method of inhibiting phosphorylation of CSF1R in a patient in need of such inhibition, comprising administering to said patient an inhibitory amount of a compound of Formula I:



wherein

R is independently H, OH, alkyl, aryl, cycloalkyl, heteroaryl, alkoxy, heterocyclic and amino;

each  $R_1$  is independently selected from the group consisting of alkyl, halo, aryl, alkoxy, haloalkyl, haloalkoxy, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$ ,  $-NR_9R_{10}$ ,  $-NR_9C(O)-R_{12}$  and  $-C(O)NR_9R_{10}$ ;

each  $R_2$  is independently selected from the group consisting of alkyl, aryl, heteroaryl,  $-C(O)-R_8$  and  $SO_2R''$ , where  $R''$  is alkyl, aryl, heteroaryl,  $NR_9R_{10}$  or alkoxy;

each  $R_5$  is independently selected from the group consisting of hydrogen, alkyl, aryl, haloalkyl, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$  and  $(CHR)_rR_{11}$ ;

X is O or S;

p is 0-3;

q is 0-2;

r is 0-3;

$R_8$  is selected from the group consisting of  $-OH$ , alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

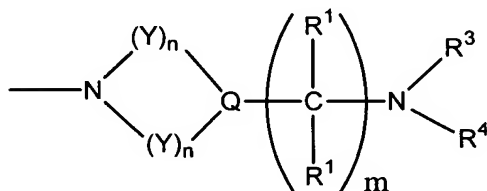
$R_9$  and  $R_{10}$  are independently selected from the group consisting of H, alkyl, aryl, aminoalkyl, heteroaryl, cycloalkyl and heterocyclic, or  $R_9$  and  $R_{10}$  together with N may form a ring, where the ring atoms are selected from the group consisting of C, N, O and S;

$R_{11}$  is selected from the group consisting of  $-OH$ , amino, monosubstituted amino,

disubstituted amino, alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic

$R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

Z is OH, O-alkyl, or  $-NR_3R_4$ , where  $R_3$  and  $R_4$  are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, cycloalkyl, and heterocyclic, or  $R_3$  and  $R_4$  may combine with N to form a ring where the ring atoms are selected from the group consisting of  $CH_2$ , N, O and S or



wherein Y is independently  $CH_2$ , O, N or S,

Q is C or N

n is independently 0-4; and

m is 0-3.